

## 2SB1255

## Silicon PNP Epitaxial Planar Darlington Type

Power Amplifier

Complementary Pair with 2SD1895

## ■ Features

- Optimum for 90W hi-fi output
- High DC current gain ( $h_{FE}$ ): 5000~30000
- Low collector-emitter saturation voltage ( $V_{CE(sat)}$ ):  $< -2.5V$
- "Full Pack" package for simplified mounting on a heat sink with one screw

■ Absolute Maximum Ratings ( $T_c=25^\circ C$ )

Item	Symbol	Value	Unit
Collector-base voltage	$V_{CBO}$	-160	V
Collector-emitter voltage	$V_{CEO}$	-140	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-7	A
Peak collector current	$I_{CP}$	-12	A
Collector power dissipation	$T_C=25^\circ C$	100	W
	$T_a=25^\circ C$	3	
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ C$

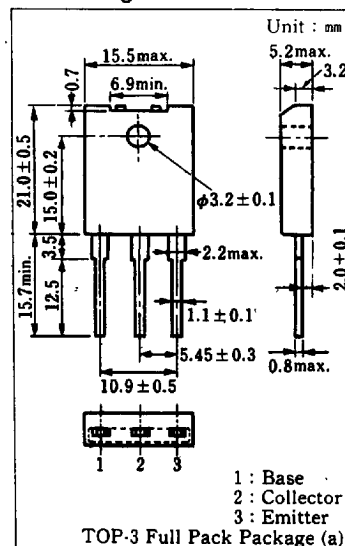
■ Absolute Maximum Ratings ( $T_a=25^\circ C$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -160V, I_E = 0$			-100	$\mu A$
Collector cutoff current	$I_{CEO}$	$V_{CE} = -140V, I_B = 0$			-100	$\mu A$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$			-100	$\mu A$
Collector-emitter voltage	$V_{CEO}$	$I_C = -30mA, I_B = 0$	-140			V
DC current gain	$h_{FE1}$	$V_{CE} = -5V, I_C = -1A$	2000			
	$h_{FE2}^*$	$V_{CE} = -5V, I_C = -7A$	5000		30000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -7A, I_B = -7mA$			-2.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -7A, I_B = -7mA$			-3.0	V
Transition frequency	$f_T$	$V_{CE} = -10V, I_C = -0.5A, f = 1MHz$		20		MHz
Turn-on time	$t_{on}$	$I_C = -7A$		1.0		$\mu s$
Storage time	$t_{stg}$	$I_{B1} = -7mA, I_{B2} = 7mA$		1.5		$\mu s$
Collector current fall time	$t_f$	$V_{CC} = -50V$		1.2		$\mu s$

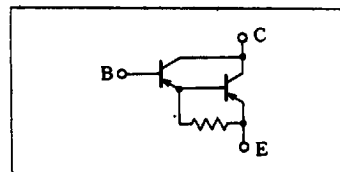
\* $h_{FE2}$  Classifications

Class	Q	P
$h_{FE2}$	5000~15000	8000~30000

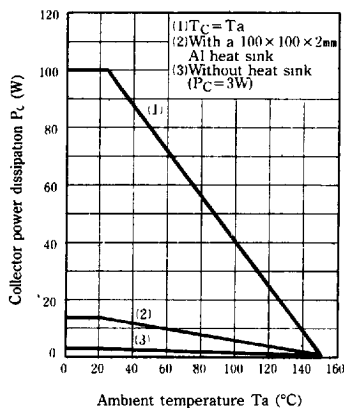
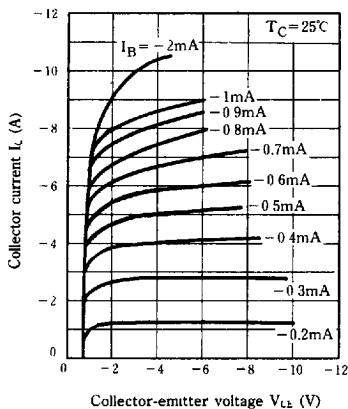
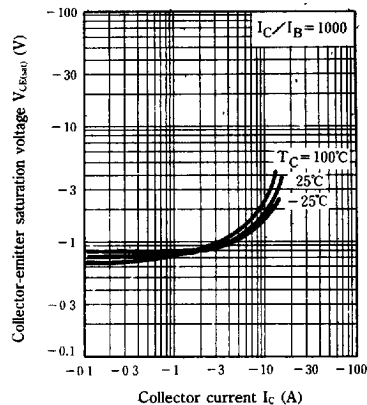
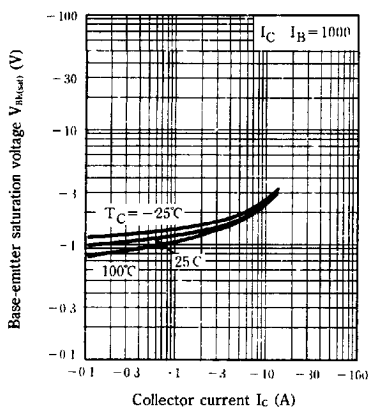
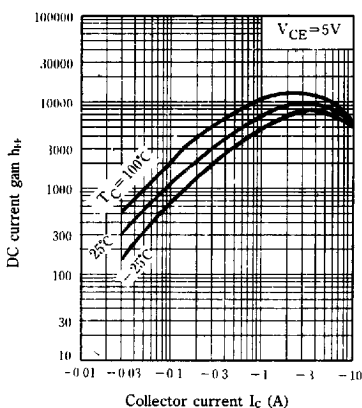
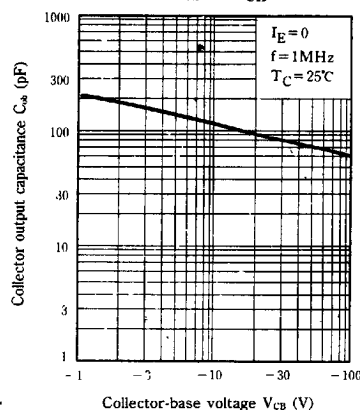
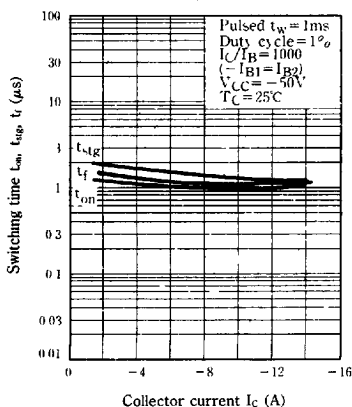
## ■ Package Dimensions



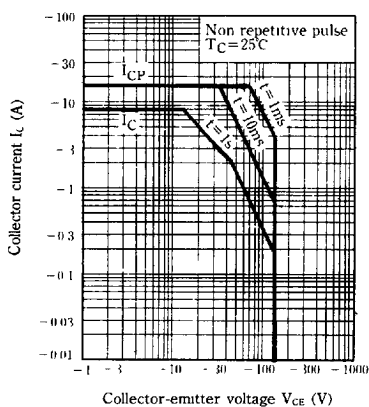
## ■ Inner Circuit

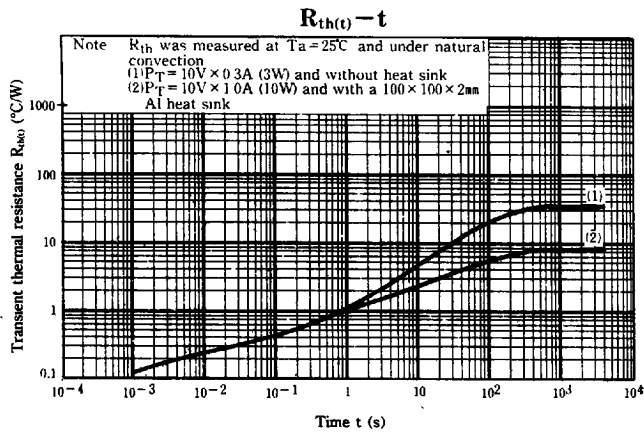


6932852 0016285 984

$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $C_{ob} - V_{CB}$  $t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)





6932852 0016287 757